

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method of removing mercury from a coal fired power plant exhaust gas comprising
passing said exhaust gas through a bulk particle collection device to remove a plurality of coarse particles using a coarse particle filter,
introducing powdered activated carbon into ~~said~~the exhaust gas downstream of said bulk particle collection device,
introducing said powdered activated carbon and said containing exhaust gas into a fine particle filter to separate ~~mercury containing~~ said powdered activated carbon from mercury in said exhaust gas,
separating said powdered activated carbon from said mercury at an elevated temperature and in an inert gas environment, and
introducing said-separated powdered activated carbon into said exhaust gas upstream from said fine particle filter.
2. (original) The method of claim 1 including
subsequent to separating said powdered activated carbon from said mercury and said inert gas separating said mercury from said inert gas.
3. (currently amended) The method of claim 2 including
effecting a said-desorption of said activated carbon at a temperature of about 300 to 500 °C for about 5 to 60 minutes.
4. (original) The method of claim 3 including
effecting said desorption in a continuous process.
5. (original) The method of claim 4 including
after separation of said mercury from said inert gas introducing said inert gas into said exhaust gas upstream of said fine particle filter.

6. (currently amended) The method of claim ~~34~~ including
introducing at least a portion of ~~said desorbed powdered~~ activated
carbon into ~~a~~ the combustion chamber of said coal fired process plant.
7. (currently amended) The method of claim 1 including
employing said ~~method~~ process on ~~said exhaust gas~~ mercury containing
~~exhaust gas~~ having about 1 to 1000 ppm of mercury.
8. (currently amended) The method of claim 1 including
~~subsequent to said fine particle filter removal~~ recirculating at least a
portion of said mercury containing powdered activated carbon into said exhaust gas
upstream of said fine particle filter.
9. (original) The method of claim 1 including
employing nitrogen as said inert gas.
10. (currently amended) The method of claim 1 including
removing ash from said coarse particles in said coarse particle filter.
11. (currently amended) The method of claim 2 including
employing said ~~method~~ process on mercury containing exhaust gas having mercury in
an amount of about 1 to 1000 ppm to about 1-10 micrograms per cubic meter of said
exhaust gas.
12. (original) The method of claim 1 including
employing in said bulk particle collection device a coarse filter.
13. (original) The method of claim 1 including
employing in said bulk particle collection device an electrostatic precipitator.
14. (currently amended) Apparatus for recovering mercury from an exhaust
gas from a coal fired power plant ~~exhaust gas~~ comprising
a bulk particle collection device having a coarse particle filter for
removing coarse particles from said exhaust gas,
a fine particle filter disposed downstream of said coarse particle filter,
a carbon source for introducing powdered activated carbon into said
exhaust gas between said coarse particle filter and said fine particle filter,
said fine particle filter being structured to separate mercury containing
powdered activated carbon from said exhaust gas,

a ~~desorber~~desorption unit for separating said powdered activated carbon from said mercury in an inert gas environment, and
recirculating said powder activated carbon through said exhaust gas between said coarse particle filter and said fine particle filter.

15. (currently amended) The apparatus of claim 14 including
a separation unit for separating mercury from said inert gas received from said desorption unit.

16. (original) The apparatus of claim 14 including
said desorption unit being structured to effect desorption at a temperature of about 300 to 500 °C for about 5 to 60 minutes.

17. (currently amended) The apparatus of claim 14 including
said desorption unit~~desorber~~ structured to effect a said~~said~~ desorption as a continuous process.

18. (currently amended) The apparatus of claim 15 including
said ~~mercury and inert gas~~ separation unit being structured to deliver said separated~~inert~~ gas to said exhaust gas.

19. (currently amended) The apparatus of claim 14 including
said desorption unit~~desorber~~ being structured to effect separation of mercury from said powdered activated carbon in mercury amounts of about 1 to 1000 ppm.

20. (currently amended) The apparatus of claim 14 including
said coarse particle filter being structured to remove said coarse particles containing ash from said exhaust gas.

21. (currently amended) The apparatus of claim 14 including
a first conduit for delivering powdered activated carbon from said desorption unit~~desorber~~ to said exhaust gas intermediate said coarse particle filter and said fine particle filter.

22. (currently amended) The apparatus of claim 14 including
a second conduit for delivering powdered activated carbon separated in said desorption unit~~desorber~~ to a~~the~~ combustion unit of said coal fired power plant.

23. (currently amended) The apparatus of claim 15 including
said desorption unit~~desorber~~ being structured to effect separation of
mercury from said powdered activated carbon in mercury amounts of about 1 to 1000
ppm to about 1-10 micrograms per cubic foot of said exhaust gas.

24. (original) The apparatus of claim 14 including
said bulk particle collection device having a coarse filter.

25. (original) The apparatus of claim 14 including
said bulk particle collection device having an electrostatic precipitator.